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**REGISTERED PATENT AGENTS

June 9, 2000

WRITER'S DIRECT NUMBER:
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Commissioner for Patents
Washington, D.C. 20231

Box Patent Application

Re: U.S. Non-Provisional Utility Patent Application under 37 C.F.R. § 1.53(b)
Appl. No. To be assigned; Filed: June 9, 2000
For: **Phase Shifting Applications of Universal Frequency Translation**
Inventors: Robert T. Short, Jonathan S. Jensen, Martin R. Johnson, Jamison
L. Young, David S. Sorrells, Michael J. Bultman, Robert W. Cook,
Richard C. Looke and Charley D. Moses
Our Ref: 1744.0710005

Sir:

The following documents are forwarded herewith for appropriate action by the U.S.
Patent and Trademark Office:

1. USPTO Utility Patent Application Transmittal Form PTO/SB/05;
2. U.S. Utility Patent Application entitled:

Phase Shifting Applications of Universal Frequency Translation

and naming as inventors:

**Robert T. Short, Jonathan S. Jensen, Martin R. Johnson, Jamison L. Young,
David S. Sorrells, Michael J. Bultman, Robert W. Cook, Richard C. Looke
and Charley D. Moses**

the application comprising:

0050955-060900

Commissioner for Patents

June 9, 2000

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- a. specification containing:
- i. 136 pages of description prior to the claims;
 - ii. 9 pages of claims (33 claims);
 - iii. a one (1) page abstract;
- b. One-hundred and seventy one (171) sheets of drawings: (Figures 1A-D, 2A, 2B, 3-5, 6A-I, 7-14, 15A-F, 16-19, 20A, 20A1, 20B-F, 21, 22A-F, 23A-F, 24A-J, 25A-K, 26A, 26B, 27A-F, 28A, 28B, 29, 30 A-D, 31A-C, 32A-C, 33A-D, 34A, 34B, 35A-C, 36-43, 44A, 44B, 45A, 45B, 46-48, 49A, 49B, 50A, 50B, 51A, 51B, 52-56, 57A-C, 58A-C, 59, 60, 61A, 61B, 62, 63A, 63B, 64, 65A, 65B, 66A, 66B, 67A-D, 68A-C, 69-77, 78A-D, 79, 80A, 80B, 81-86, 87A, 87B, 88-89, 90A, 90B, 91A-D, 92A-D, 93A-E, 94-95, 96A-C, 97, 98A, 98B, 99A-C, 100-106, 107A-C, 108-110, 111A-F, 112-115, 116A, 116B, 117A, 117B, 118A-F, and 119);
3. 37 C.F.R. § 1.136(a)(3) Authorization to Treat a Reply As Incorporating An Extension of Time (in duplicate); and
4. Two (2) return postcards.

It is respectfully requested that, of the two attached postcards, one be stamped with the filing date of these documents and returned to our courier, and the other, prepaid postcard, be stamped with the filing date and unofficial application number and returned as soon as possible.

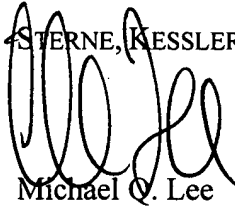
This application claims the benefit of the following U.S. Provisional Application No. 60/167,704; filed on November 24, 1999; U.S. Provisional Application No. 60/170,767, filed on December 15, 1999; U.S. Provisional Application No. 60/171,584, filed on December 23, 1999; U.S. Provisional Application No. 60/177,380, filed on January 24, 2000; and U.S. Provisional Application No. to be assigned, filed June 2, 2000, Attorney Docket No. 1744.0710004.

Commissioner for Patents
June 9, 2000
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This patent application is being submitted under 37 C.F.R. § 1.53(b) without Declaration and without filing fee.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michael Q. Lee
Attorney for Applicants
Registration No. 35,239

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PTO/SB/05 (2/98)

Approved for use through 09/30/2000. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR § 1.53(b))

Attorney Docket No.		1744.0710005
First Inventor or Application Identifier		Robert T. SHORT
Title	Phase Shifting Applications of Universal Frequency Translation	
Express Mail Label No.		

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☐ * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification [Total Pages 146]
(preferred arrangement set forth below)
- Descriptive title of the Invention
 - Cross References to Related Applications
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure

6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Copy
 - b. ☐ Paper Copy (identical to computer copy)
 - c. ☐ Statement verifying identity of above copies

3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 171]

- ☐ Oath or Declaration [Total Pages]

- a. ☐ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional with Box 17 completed)
[Note Box 5 below]

- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR §§ 1.63(d)(2) and 1.33(b).

- ☐ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
10. ☐ English Translation Document (if applicable)
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
14. ☐ *Small Entity Statement(s) (PTO/SB/09-12) ☐ Statement filed in prior application, Status still proper and desired
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☒ Other: 37 C.F.R. § 1.136(a)(3) Authorization
- ☐ Other:
- *NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27). EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-Part (CIP) of prior application No: /

Prior application information: Examiner Group/Art Unit:

18. CORRESPONDENCE ADDRESS

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or Bar Code Label

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or ☒ Correspondence
address below

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NAME (Print/Type)	Michael C. Lee	Registration No. (Attorney/Agent)	35,239
SIGNATURE		Date	6/19/2000

Burden Hour Statement: this form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SHORT *et al.*

Appl. No. To be assigned

Filed: June 9, 2000

For: **Phase Shifting Applications of
Universal Frequency Translation**

Art Unit: To be assigned

Examiner: To be assigned

Atty. Docket: 1744.0710005



**Authorization To Treat A Reply As Incorporating An Extension Of Time
Under 37 C.F.R. § 1.136(a)(3)**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The U.S. Patent and Trademark Office is hereby authorized to treat any concurrent or future reply that requires a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. The U.S. Patent and Trademark Office is hereby authorized to charge all required extension of time fees to our Deposit Account No. 19-0036, if such fees are not otherwise provided for in such reply. A duplicate copy of this authorization is enclosed.

Respectfully submitted,

STEARNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michael Q. Lee
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Registration No. 35,239

Date: 6/9/2000
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